ANCHORAGE AMATEUR RADIO CLUB
APRIL NEWSLETTER

CALENDAR

APRIL 6 GENERAL MEETING ROOM 123 CONSORTIUM LIBRARY UNIVERSITY OF ALASKA CAMPUS 7PM

APRIL 10 PARKA MEETS 7:30 PM AT CATHI MOODY"S WL7ABO EAGLE RIVER CALL 694-3258 FOR DIRECTIONS OR LISTEN 34-94

APRIL 19 BOARD MEETING FRANK DRAKE"S KL7IPV 7 PM

APRIL 20 SOCIAL LA CASA EAGLE RIVER 6:30 OR SO SEE AD IN THIS PAPER FOR DIRECTIONS

APRIL 28 & 29 FLEA MARKET PLACE TO BE ANNOUNCED

MEMBERSHIP All of you getting this newsletter have probably paid your dues but if you have not or if you have any changes like name, call, address or like that let Cathi Moody know all about it. Call 694-3258 or write P.O.Box 2481 Anchorage 99510 She has been working long and hard on getting the roster ready for printing next month.

SOCIAL Sorry about that!!!!I kind of had it in the back of my mind that the BIG FLAT TOP CLIMB would be the social BUT the weather kind of put the kibosh on the climb and there was no other social planned(I was out of town on social night) BUT NOTE that I have already picked a time and a place for the April Social....see above!

MEMBERSHIP Another note on membership, Cathi did get a communication from Bill Ward, KL7JFJ who all by himself keeps Cathi busy with address changes and Bill reports that there is life in Bethel and also reports a goof in my net schedule with DX ASSN meeting 6:30 instead of 7:30. Which makes me realize that I forgot to put the net schedule in this time. I hope you kept your last newsletter for the net schedule!!! I don't think there have been any changes.

SOCIAL Speaking of socials, PARKAs are having a dinner at the Hickory House or will have had by the time you read this. I sure hope we had a good time. Looks like we will have a good turn out. The PARKAs are or did or something(I am not quite sure which tense I'm in) have guests at the dinner.

BUNNY HUNTS

A hidden transmitter hunt was held March 11th with a few club members participating. KL7DC and KL7CO were hidden in their tiny toyota and were able to evade being found for almost 2 hours. KL7IEE was the first to locate them. Don would have been there s sooner but there was a misunderstanding of a clue---Sorry, Don. KL7UH was stopped by APD (probably to find out what on earth he was doing) while orbiting the downtown area. He also lost a tire while heading home. The hunters and bunnies met for coffee afterward and decided that the event was fun and deserves better participation next month!!!!!

Dave Olson, Half the bunny.

10-10

I have heard only vaguely about the 10-10 organization and this is reported with the fond hope that I have the right info. Please confirm any of the following by calling Jay, KL7IEN on Snipers Net, on 52 direct or phone home 376-2046, and work 265-2655. 10-10 International Net Incorporated is sort of an amateur lobby to keep 10 meters busy and therefore in the amateur alloted frequencies. To get a 10-10 "number" you contact five hams who have 10-10 numbers send a record of the contacts and $4.00 to #6JIO Jim Melrose and you get a 10-10 number and they have a quarterly magazine and a certificate. NOW Jay KL7IEN is stirring an Alaskan Idetarod Chapter 10-10 International and to become a chapter member, you must first have a 10-10 number and then get 15 points. A contact with a charter member of the Alaskan chapter counts 3 points. I imagine by this time the 50 charter members have been taken. When I talked with Jay, he had 42 signed up and that was a week xxxx ago. Regular members of AK chapter contacted count less than charter members I don't think Jay told me but anyway you can find out all about iton Saturdays, 2000 GMT (Universal cooddinated time) on 28.849 You need a 10-10 number, fifteen points by contacting AK members and one dollar and a couple 15 cent stamped envelopes. All going to Jay. I hope this is more or less what Jay told me.

ADS

HEATHKIT STATION HR 10-B RCVR DX 60-B TRANSMITTER HG 10B VFO HS24 SPEAKER $175.00 call Jess 694-2834

FOR SALE TOWER AND BEAM HY GAIN TH6DXX. HAM 3 ROTOR, 58 FEET ROHN 256 series TOWER ALL ACCESSORIES....CALL JESS 694-2834

WANTED TO BUY AN R390-A or equivalent call Ray, 243-4354

MANY THANKS TO AL KL7FKO FOR MANY MONTHS OF FREE ADDRESS LABELS VIA HIS COMPUTER

THANKS THIS MONTH TO BOB KL7HIU FOR THE ADDRESS LABELS VIA HIS COMPUTER.

The Dual Dipole Antenna

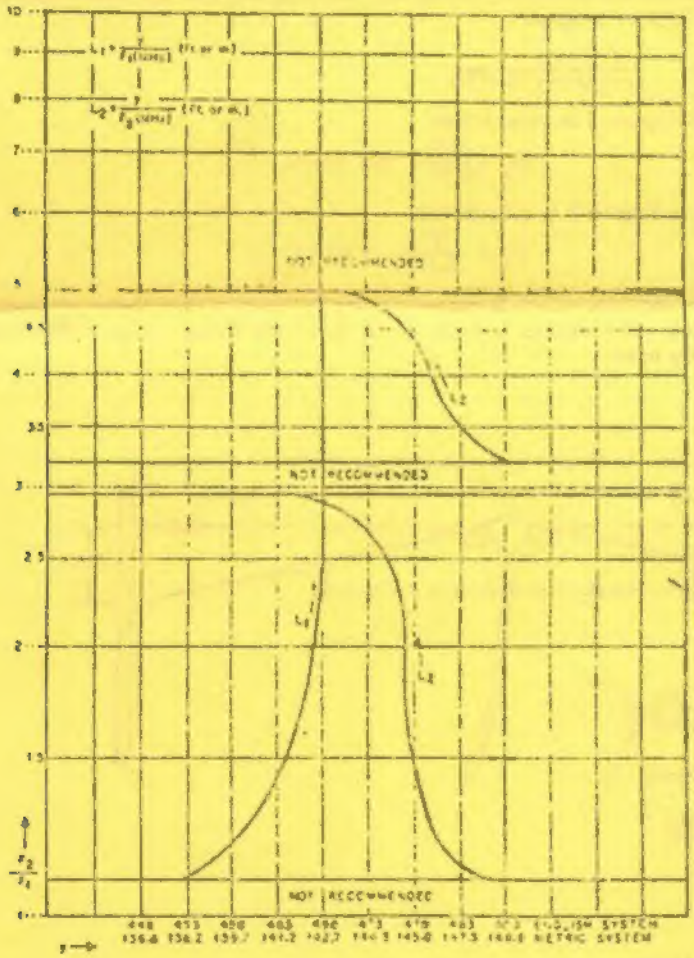
Antenna erecting space is usually at a premium. When you want to be able to use two frequencies that are widely separated, you ordinarily need two antennas and two feedlines. Here is a design that will permit you to have two antennas within the space normally required for one (feedline).

A dual dipole antenna is essentially two antennas connected to a common feedline. There is interaction between the dual dipole elements, which affects the lengths (depending upon the frequency differences between the two). Therefore, the old standard $\frac{468}{fmc}$ cannot be used for each dipole desired. The chart in Figure 1 is provided to make wire length calculations easy.

A typical example will demonstrate the use of the chart in Figure 1 and the correction factors involved. Taking frequencies 4580 and 7313.5 KHz (Region 2 frequencies) for the two antennas and using the formula $\frac{F2}{F1}$ where the lower frequency is always represented by F1, the frequency relationship factor is 1.6.

$$\frac{F2}{F1} = \frac{7313.5}{4580} = 1.6$$

Following the relationship factor line across in a horizontal plane in Figure 1 until it intersects the curves of L1 and L2, we find the correction factor Y (in feet) to be 465 for L1 and 477 for L2. By using the following formula, the overall length of each dipole can be calculated.



WAØLPK
Jim thought we might be interested in this Antenna

FIGURE 1: Correction Factor Chart for Dual Dipole

After calculating the proper length of the dipole, the dual dipole antenna is assembled as follows:

1. For D_1 cut two lengths of wire, eight inches longer than one half the length determined in the above calculations.

2. Install an end insulator on each length of wire cut in step 1 by passing the wire through the insulator eye and wrapping the wire around itself at least five full turns.

3. Now, take the other end of the wire for D_1 and attach it to the center insulator (a W2AU-type balun will be fine). Before wrapping, adjust the length so that the distance from the end insulator to the center of the center insulator (or balun) is one half of D_1. Then wrap the wire aound itself five times. Repeat for the second half of D_1.

4. Steps 2 and 3 above are now repeated for dipole D_2.

5. Measure the distance between the two antenna supports and divide the measurement by four. Use the one fourth dimension to determine the attaching point for the second dipole to the support as shown in Figure 2 (D/4).

6. Install the antennas on the antenna support. When supporting the antenna by the ends only, DO NOT ATTEMPT TO REMOVE ALL SAG FROM THE ANTENNA, otherwise tremendous stress will be applied to the antenna and something may break. Leave approximately ten percent sag in the antenna (one foot for each ten feet in length). The antenna center insulator should also be supported if the operating frequency is below 3.6 MHz (antenna length of 130 feet or longer).

$$\text{Length (feet)} = \frac{\text{Y (feet)}}{\text{frequency in MHz}}$$

The length in feet of dipole D_1 in Figure 2 is calculated

$$D_1 = \frac{465}{4.58} = 101.53 \text{ ft.}$$

The length in feet for dipole D_2 in Figure 2 is calculated

$$D_2 = \frac{477}{7.3135} = 65.22 \text{ ft.}$$

The chart in Figure 1 can be used for other frequency pairs but notice that there are three "not recommended" areas indicated. If the frequency relationship is such as to fall into these areas, either single dipoles or other suitable antenna systems should be used.

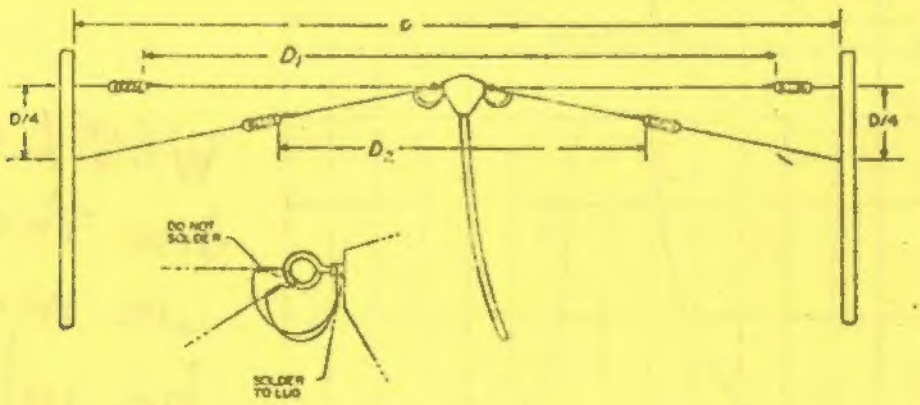


FIG 2 - Dual Dipole Antenna

By T. Lawson Young, EP2YL
(formerly AFN4LY)
Rgn 2 MTS member

One more Apology
KL7ERW Ray apologizes
to hams because he
hasn't told you He Fixes
ham gear - repair
calibration modification
Reasonable Prices
Anchorage Electronics
Spenard & Fireweed
243 4354

SERVING THE FINEST IN MEXICAN FOOD

La Casa

MONDAY thru THURSDAY—11:00 to 9:00
FRIDAY and SATURDAY—11:00 to 10:00
CLOSED SUNDAY

Luncheon Specials 11:00 am to 2:00 pm, Dinners after 2:00 pm

FAMILY NIGHT
Tuesday and Wednesday from 5:00 pm to 9:00 pm
Dinner Number 2, 6, 6a and 7 — $3.25

ORDERS TO GO 694-3245

Eagle River
Barber Shop

See Don
the Barber

Muldoon Amusement
Center
Pool Pinball Foosball
Air Hockey
Video games
Snack Bar
514 Muldoon Rd
337-7823

TRI Chem
Liquid Embroidery
Call Sheryl Lawrenc
(PARKA member)
333-4211 (after 5:3
or weekends)

THE ULTIMATE NARROW BAND PHONE TRANSMITTING AND RECIEVING SYSTEM

(continued)

The CONTRA - POLYSYLABILITOR (pronounced contra-polysylabilitor)(see diagramme)

The IF carrier is detected to Quasi D.C. by the detecator. We tried using solid state devices as soon as they were invented but were very dissapointed, even the new CK-722 did not do very well compared to a good old UV 201A. It was soon true that 21 CK-722s = 4 UV 201As so we stayed with the good old bottles. We recently tried a MPF102 FET in the Multiplicandicators and found the MPF102 to about equal ½ of a Deforest H (which are hard to get these days.) so we put in type 30s and had good vacuum tube simplicity and reliability once again. Well back to theory, the derivative-integral subtrix matrixor brings out the 10,000 slices of audio and readies them for the super multiplier cascades where the samo high number (still proprietary) is used to multinly the Quasi D.C. back to original audio matrix that you could hear. Fidelity is supplied by the Flatter and Sharper and Timbre Restorer. Solid state can be used i n the flatter as it is current related and so are the transistors but in the sharper it is just the opposite since it is voltage related. Because of the limited abilities of solid state,257 8080A chips and their support chips were necessary to equal 62 201As!!!!!!! We settled on using 31 6EU7's, in the flatter. The timbre restorer (pronounced TAM) has too big a job to let solid state fool with so this important function was left to a few good tubes I like the way the old #77 work, you can see em lite, it gives one a lot of confidence. Again the audio is processed by standard circuits the best of the lot were the ones using the 245s and 2A3s with the good old 210 in there pitching. We tried using solid state but that DISCO sound always came thru.

Just playing with the CONTRA - POLYSYLABILITOR across the band is fun as it views any carrier as one to decode. Since there is a finite amount of ESP and Mind Over Matter in all human functions it is sometimes possible to hear the audio that a C.W. man is thinking as he sends his C.W. (YL C.W. OPs seem to have blank minds) By finding the correct number to use as the multiplier language translation should be possible. We have noticed that twice a Finnish basso profundo gives a Russian colouraturo. if the basso is in French and the Russian is OK in Hindustani. We have tried it on music and found that hard rock sound like a diesel with a swallowed valve. This is all done by altering the multiplier.

We have fun with our units and they enable us to operate in complete freedom from QRM and QRN but since we have only one SUB-MONOSYLABILIZER and one CONTRA-POLYSYLIBILITOR good QSOs are hard to do. Won't someone build some more so we can QSO?

THE ULTIMATE IN PHONE IS PURE D.C. It just doesn't seem possible. OK so you don't believe it well try dividing 60 by 10**1,000,000 and seeing your years per cycle. (you should live so long)

73 K L 7 J K E

THE ULTIMATE NARROW BAND PHONE TRANSMITING AND RECIEVING SYSTEM

By K L 7 J K E (King Love Seven Just Kidding Everybody)

Desigmed April 1920/21

Summary, The popularity of narrow band transmission has been on the increase because it is supposed to conserve the air space and since the Arabs have a monopoly on this they are liable to raise the price. (There is more air on the desert than in Brooklyn) Thus we should conserve. There have been some ideas lately that are funny and complicated. This is a presentation of a system that has been in operation since the last tube was plugged in. (a 6EU7) The principal is so simple it is funny. End of summary.

Text. The principal of this system is simple. If we divide 60cps by a large number say 10 raised to the 1,000,000 power we have a frequency of one cycle per 5.285 X 10**999,990 years (**=exponentiation) This obviously is not dectable from pure D.C. A frequency of 6,000cps is one cycle per 5.285 X 10**999,988 years which is also essentially pure D.C. Now if we multiply the frequency of the "Quasi D.C." in each of the above cases by the correct number we get the original frequencies. We use this "Quasi D.C. to modulate the carrier which obviously occupies only a single frequency (appearantly) if SSB is used, or just 3 finite frequencies if AM is used, or 2 finite frequencies if a side band is supressed. We then multiply this detected signal by the correct number and out pops the audio to any fidelity we wish. NO LONGER DO WE NEED TO HAVE AUDIO FILTERS !!!!!!! to make the AM only 6 KC wide!!!! HI-FY phone comes thru CW filters!!!!!

The development of this system has taken many April firsts since the initial designs were made 1 April 1920/21. The thermionic devices (vacuum tubes stupid) have paced the development starting with the old stand by WD-11 thru the modern 6EU7 and 6HS6!!!!! Personally, were I to design it all over I would use the UX-199 and the UX-201A through out. These are oldies but one must admitt they just do as told, no surprises! Both respond nicely to gain control by varying the filament voltage. (lets see you young smart alecks try that with a 14 legged spider!!)

The SUB - MONOSYLABILIZER (pronounced sub-monosylabilizer) (see diagramme) first amplifies the audio then gradio classifactors it in 2 stages. We now have the audio in 10,000 slices. The Multix-Quotiontalizer divides each by a single high number (this is a proprietary number that is not devulged but will be later in part). The Decadent Sumalizer adds all these Quasi D.C. components and feeds them to the Quasi D.C. Modulator the power is built up thru Push Push and Push Pull drivers to the necessary power. A good old 833A slugs the final's plate with Quasi D.C. modulation and the antenna kicks the air waves with what looks like a D.C. note. (the FCC has been continually upset because they insist that our signal is not modulated because THEY can't demodulate it. However it is quite unnoticed in the CB band by any one so that is where we usually operated. Our power is however never over 40KW so it is not ever the strongest signal in the band.)

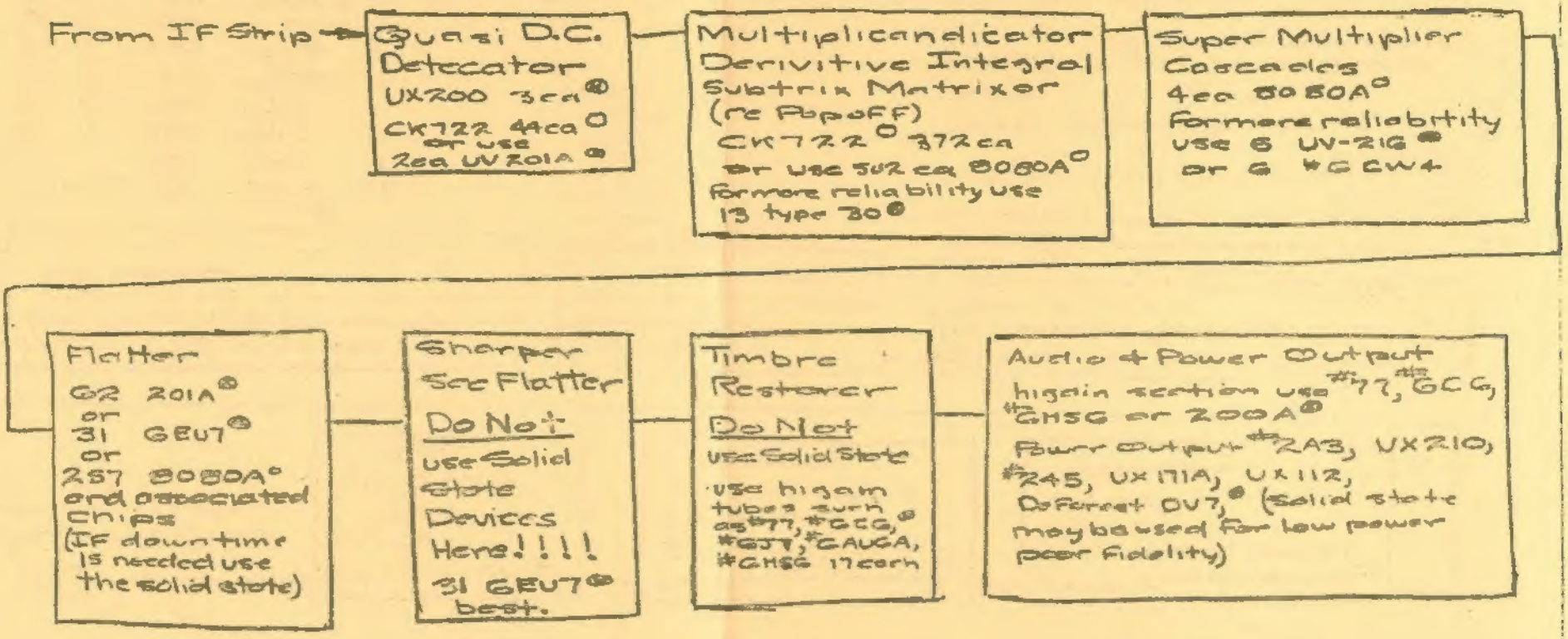
The Ultimate Narrow Band Phone Recieving System

Contra-Polysylabilitor

Block Diagram (See text)

⊛ Thermionic Device Type Number

○ Solid State Devices



Powr supply may use solid state but much higher reliability is possible using UV-217-A's or 280, or 281 or 283 or 836 or 872A tubes.

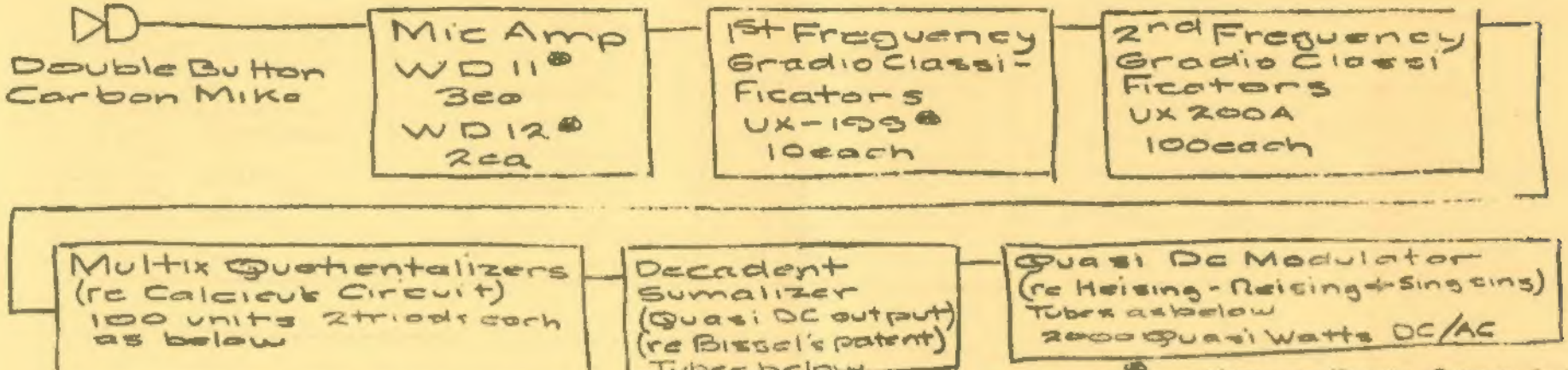
Designed 1 April 1920 by KL7JKE
(King Love Seven Just Kidding Everybody)

The Ultimate Narrow Band Phone Transmitting System

Sub-Monosylabilizer

Block Diagram (see text)

⊗ Thermionic Device Type Number



1	thru	10	301A ⊗	2ea
11	"	20	326	"
21	"	30	327	"
31	"	40	#37	"
41	"	50	#39/44	"
51	"	60	#76	"
61	"	80	#6C5	"
81	"	90	#6F5	"
91	"	100	#6EU7	1ea ⊗⊗

⊗⊗ These were tried as CK722 solid state devices but were no good.

WD-11 ⊗	3ea	
UX112	5	"
WD-12	6	"
327	7	"
#30	4	"
#6C5	1	"
#6EU7	12	"

C-302 ⊗	1st Push Push Amp	2ea
UX-852	1st Push Pull/Push Push Driver	2 "
W.E. 215-A(M)	PP/PP Quasi DC. Driver	2 "
204A	Quasi Driver	2 "
808	" "	2 "
833A	Super Hetro Quasi DC Power Modulator	4 "

Designed 1 April 1921 by KL7JKE
(King Love Seven Just Kidding Everybody)

Essentially this device divides all audio frequencies from Mic by a constant of very great magnitude (proprietary information) thus QUASI DC. is formed and is used to plate modulate the carrier.

(Again Amateur Communications), Alaskan style, proved effective. One of the longest dog mushing races in the North American Continent has finally come to an end. The Iditarod dog race started February 24 at 10:00 AM from Mulcahy Park. After 1 year of preparation the largest communication network ever put together for such an event was put into operation. 45 Hams, a time schedule, flight schedules both private and commercial aircraft, personnel deployment, supplies and logistic support, all started on time to cover 1049 miles of some of the most rugged territory in the country.

Twenty one amateurs prepared for the first leg of the race early saturday morning. Ten meter checkpoints were set up between Anchorage and Eagle River and Wasilla to Knik Lake. Every road crossing and hazard point along the route was manned. Thanks to the Anchorage Club, 34/94 was used for the first part, from Mulchby Park to Eagle River. Everything was being relayed to the starting line, where net control, KL7IYH and route Audinits), and to the restart at Lake Lucille being manned by KL7JFT and XYL, KL7ILA, KL7IKE and WL7AAX.

Maps were on display at the restart showing the mushers' locations and times at each of the checkpoints. As the mushers arrived at Eagle River, KL7ITI transmitted the times of arrivals to [illegible] where the checkers recomputed them for the restart so that by the time the mushers picked up their dogs and [illegible] arrived they would be ready to continue on at the required time.

Thanks to the [illegible] mentions, Creeks about high winds, we managed to tie down the antennas [illegible] were ready for it. The [illegible] and planes on the lake didn't take our warnings seriously until [illegible] of wind hit right [illegible] the P.A. system and the [illegible] picked up and 3 airplanes [illegible] flipped over, our reports [illegible] began getting immediate attention.

As the race was proceeding, we began manning our remote checkpoints - Lake Lucille went into high gear. KL7IEN activated the Army MARS repeater for communications from Susitna Station on 148.01/143.9[illegible], with 34/94 and 64/64 still going along with race reports and time updates. The rigs

things) got a bit active with a 3rd radio on the air. In spite of the winds the race continued. We closed out our last local 2 meter checkpoint at 7PM at Knik Lake.

The 3 Base Stations) now activated, KL7JQI & KL7JDH in Anchorage, KL7JFT & XYL with KL7IKE standing by in Wasilla, and AL7N and AL7V in Nome. This was a continuous vigil that ended Saturday night the 17th of March, when our last checkpoint returned to Anchorage. KL7JKC won the lantern. The 2 Base Stations) ran continously for 24 hrs a day. Over 300 pieces of written traffic were passed and over 75 phone patches were conducted. Except for a few problems with the news media, things went quite well and on schedule.

As in any organized and preplanned event changes came about as things progressed. Last minute personnel changes came up so checkpoint assignments shifted. KL7IXT, our chief pilot sat down with his team and figured out flight times and gas requirements for the planes. As things continued we moved KL7IKR and KL7DS onto Tyone River and KL7JDG into Squentna to finish up. Meanwhile KL7JKC was doing the

400 yd dash at Finger Lake between the Dicker and his cabin, which had no stove (in working order) - Then Farwell's phone went out along with Nikolai, so KL7JDG was recruited to move on up to Farwell. KL7HHO moved on into Nikolai and everything continued on and still on schedule.

Rainy Pass was used for our pilots and mid control point. KL7IZJ and KL7IXT had the honors of this checkpoint. We heard rumors of lobster tails and steak, but no one would confirm that, however, one message was received from the caretakers this asking for instructions on how to boil lobster tails from the Westward's Chef.

Radio trouble was encountered at Farewell, and battery trouble at Nikolai, but the operators continued to operate and pass information. Despite radio trouble, antenna location and bad band conditions, KL7JDG. being a rookie Iditarod Communicater managed to celebrate his 16th birthday, a cake was flown in by one of the pilots.

Now that things were really rolling. and KL7JDI was on her second case of Dr. Pepper and Judy Bush was...

running out of paper, AL7G reported into the Iditarod net from there, but McGuire's Tavern in McGrath. Due to slight difficulties with the FAA, Buddin and Ed Anderson provided a place to set up the station. A long wire was tried, but the Aluminum roof was found to be a better antenna and the long wire was used for a ground plane or so AL7G says. I think it was all the Aluminum beer cans under the roof.

Our pilots now moved this base of operation to McGrath. By this time the hit song "Iditarod Blues" by KL7IKR and KL7DS and the Iditragedy became a hit at McGuires Tavern.

The weather began to take effect. It slowed the dogs down just enough to get KL7IZL to Iditarod, which turned out to be the most critical checkpoint on the trail. Our biggest problem was staying warm. It was -30° inside as well as outside the tent. Yes a "tent"

Disaster struck, cold, snow blocked the trail. (snow machines) had to be sent out to re-open the trail. Then came an urgent call for help. (The Flemings) the only resident of Iditarod had a cooking accident, Cathy became burnt

very badly by boiling liquids. KL7IZL immediately asked for assistance. KL7 HPU and AL7G Tigan relays. KL7CUK relayed down to Anchorage to KL7JOI, who patched in a doctor to KL7IZL. AL7G patched in the birth nurse from McGrath and instructions were sent to the scene. KL7HPU at Flat sent over medicine, formula for the young baby was flown in from McGrath. A few days later she was moved to Anchorage. Several stations responded and stood by during the emergency to lend assistance if further relays were necessary. Excellent communication procedures allowed the traffic to be passed and the required aid ~~required~~ provided with the minimum of interference. Mother and baby are doing fine. The trail was reopened and the race moved on. Again KL7IKR and KL7DS were moved ahead to McGrath and on out to Shageluk.

The word got out that hot showers were available at Shageluk and the race was on again. Now KL7IKR and KL7DS relaxed, playing Bingo after a hot shower, a much deserved rest. Again weather grounded us and the lead mushers got ahead of us at Anvik, but

finally WL7ABC/AR, the newest general and youngest rookie on the trail checked in and KL7BE checked in from Haycling. WL7ABC was our anchor man in the corner of Anvik, a fitting end for the ABC film crew coverage the race had this year. Finally AL7H got to Eagle Island and we were back on schedule.

The race became pretty routine at this point. Messages started coming in for racing sleds to be sent to Unalakleet. The race began to heat up a bit, as the leaders pulled ahead of the pack. After a brief break KL7JKC was back out on the trail at Kaltag, and again our 440 yd dash expert was back on his track going back & forth from one end of the village to the other relaying dog by formation and traffic. This time though, he did mention something about Chocolate Chip cookies and something pleasant to look at, only he knows the whole story.

Now our part was done, or was it. A sled just came down from Nome for more amateurs. The inevitable happened, the phones went out. W7RAP manned White Mountain temporarily. So on up the trail proceeded KL7JKC.

White Mountain was to be our last checkpoint. Again a small emergency erupted. A small plane ~~crash~~ came down breaking the landing gear. W7KAP put out the word for assistance. KL7IVG and AL7N responded with KL7CUK, KL7JDI and KL7JFT standing by. The Nome end handled the situation. There were no injuries, only a little hurt pride. Kenai and Soldotna stations came up to relay the news that everyone was safe to the family and friends of the plane victims. Again good communication procedures.

After a slight detour to Nome KL7JKC returned to Anchorage.

Our mission was finished. We were asked for assistance and it was provided. 45 amateurs directly participated in the race communications, supported by 4 pilots and air charters. We had the full backing and support of the Anchorage Iditarod Trail Committee. Our budget was $3866.00. This could not have been obtained without the generous donation from RCA Alascom and the Anchorage Amateur Radio Club. Our publicity was fair, mainly due to the efforts of KL7IUI, Lois English and Kenny Hall of the Iditarod Committee. KL7IGE, our stateside

Bush who put in many hours of operation relaying information about the race to hams in the lower 48 and Dog Mushing Associations. Our special QSL card has had tremendous results. The Mat-Su club will be busy for awhile answering them.

We are preparing for next year, shortly. More checkpoints will be needed and more amateurs, Lets start early and be prepared.

As head of the "Iditarod Communications Network" this year, I would like to thank all of those who made it a success.

This Iditarod story handwritten by Judy Bush. Don wrote the original which only Judy could read.. A terrific Job well done!

: Geology news flash. It was noted that the stalactites and stalagmites
:k of Flippers are all in bits and pieces........

AARC
Box 1987
Anchorage AK 99510

BULK RATE
U S POSTAGE
PAID
ANCHORAGE AK 99510
PERMIT NO. 223

a

STEWART RICHARD L
3858 CARAVELLE DR
ANCH AK 99502